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LIFE EVENTS, RESISTANCE RESOURCES, AND HEALTH STATUS IN
SOCIAL CASEWORKERS¹

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ABSTRACT

Social case workers (N=318) participated in a longitudinal study designed to explore the relationships among life stress, possible "resistance" resources, and subsequent physical illness. Life stress was measured by the Recent Life Changes Questionnaire (RLCQ) while intra- and interpersonal traits and perceived community resources were measured using the Eysenck Personality Inventory, the State-Trait Anxiety Inventory, the Interpersonal Checklist, and portions of the Community Adaptation Schedule. Ten months later

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frequency of subsequent physical illness was measured by the Physical Health Status Questionnaire. Increased frequency of physical illness was associated with life changes in the work sphere and with greater hostility and inappropriate overreaction in interpersonal interactions.

Introduction

Life stress has been repeatedly acknowledged to be a causal factor in health and illness. The recording of stressful events as a basis for diagnosis of health status originated with Adolf Meyer's "life chart" (Meyer, 1951) although systematic recording of such events across diverse groups occurred much later (Holmes and Masuda, 1973). The Schedule of Recent Experiences (SRE) was developed to record the occurrences of life change events in work, home, family, health, finances, and community life (Hawkins, Davis, & Holmes, 1957). The SRE was subsequently modified for prospective life change and illness studies as the Recent Life Changes Questionnaire (RLCQ) (Rahe, 1972). The voluminous research from studies using the SRE has been compiled by age, marital status, sex, socio-economic status, ethnicity, level of education and culture (Masuda & Holmes, 1979).

The relationship between stress and subsequent health status has been challenged by Rabkin and Stuenkel (1976). They questioned the small magnitude and minimal practical significance of correlations between number and nature of life events and subsequent illness episodes, possible contamination between events and symptoms, generalized sampling of life events, and procedures for weighting life events.

Some persons exposed to high stress do not develop physical illness presumably because "social assets", "filters", "generalized resistance resources", or "social supports" act as mediating variables (Cobb, 1976). The consistency of stress-illness relationships suggests that the search for mediating variables is crucial as a means of responding to these criticisms. For example, Kobasa (1979) clearly described differences between high stress/high illness and high stress/low illness executives. High stress/low illness persons believed in the importance of their own values, goals, and personal assets. They were actively involved with their environment and able to evaluate stressful life events without perceiving them as threats to their private spheres. On the basis of her findings, Kobasa (1979) suggested that prospective longitudinal studies of the variables that mediate between stress and illness were necessary. The present study is an exploration of "resistance resources" that mediate between life stress and subsequent physical illness episodes in a relatively homogeneous population of social caseworkers.

Method

The subjects were 553 college graduate Arkansas caseworkers, aged 29 to 65, with 70% females. All were informed that participation was voluntary and consisted of self-administered questionnaires. Simultaneous distribution of questionnaires to all workers was accomplished by the administrators in the 49 districts. Completed materials were mailed directly to the research office. The study was conducted in two phases using a prospective design: Phase I provided predictor variables for life stress and resistance resource measures as well as demographic information while Phase II

provided criterion variable data, the number of illness episodes occurring during a ten month interval.

Of the total case work population, 521 or 94% participated in Phase I, while there were 406 or 77% in Phase II. Attrition was due to termination of employment for 84 persons and nonparticipation for 31 persons. The Phase I measures were the 55-item Recent Life Changes Questionnaire (RLCQ) for life stress as well as the Eysenck Personality Inventory (EPI) and the State-Trait Anxiety Inventory (STAI) to assess interpersonal resistance resources, the Interpersonal Checklist (ICL) to describe interpersonal resources, and an abbreviated Community Adaptation Schedule (CAS) to suggest ties to the community. The Phase II criterion measure was the Physical Health Status Questionnaire (PHSQ).

Demographic Information

Demographic data were obtained on length of time employed, age, sex, family income, ethnic group, number of dependents, population of birthplace, population where lived most of life, number of persons in household, religion, and marital status.

Instruments

Recent Life Changes Questionnaire. The RLCQ requires the respondent to endorse life event items in work, home and family, personal and social, health, and financial areas experienced during the previous 24 months. RLCQ scoring methods were based on the unit scoring method (USM) for 55 events which provides for equal weighting of each event (Ross & Mirowsky, 1979).

Eysenck Personality Inventory. The EPI is a 48-item, forced choice inventory that measures personality reliably on

two independent dimensions, extraversion-introversion (E) and neuroticism-stability (N). Extraversion refers to outgoing, unreserved, sociable, and uninhibited tendencies while introversion includes being quiet, retiring, introspective, and reserved. Neuroticism indicates emotional overreactivity with difficulty returning to a steady state after stress while stability refers to good adjustment or appropriate emotional responsiveness and an absence of specific unpleasant experiences.

State-trait Anxiety Inventory. The STAI (Spielberger, Gorsuch & Lushene, 1970) is a 40-item questionnaire measure of transitory, situationally-induced anxiety (A-state) as well as more consistent personality dispositions to anxiety (A-trait). For example, "I feel calm" would be an A-state item while "I am a steady person" is an A-trait item. Degree of agreement with each item is indicated on a four-point scale. The test was developed for normal persons and extensive research has indicated substantial A-trait reliability while A-state reliability is low as a result of sensitivity to situational factors.

Interpersonal Checklist. The ICL was developed by Leary (1957) as a self-report measure of interpersonal traits stemming from an interpersonal theoretical framework. Interpersonal behavior is described by 16 traits, arranged in eight pairs and aligned on two major dimensions, dominance-submission (DOM) and affiliation-hostility (LOV). The DOM and LOV dimensions are summary scores for the 16 traits. Each trait is considered to be present in all persons and varies on a four-point continuum from mild to extreme or inappropriate. For examples, the trait dis-trustful is measured on this continuum by "able to doubt others", "touchy and easily hurt", "jealous", and "distrusts everybody".

This intensity dimension permits measurement of psychological disturbance. The 128 items provide an indication of the intensity of traits (AIN) and acquiescence response set is suggested by the total number of items endorsed (NIC).

Community Adaptation Schedule. The CAS assesses behavior, affect, and cognitive perceptions regarding the community. Six aspects of community are measured by Likert-type items that include family, professional, work, social-commercial, and civic-organizational or larger community ties. For example, the work question, "How do you feel about changing your job?" is responded to on the basis of choosing one of six alternatives, "Very happy where I am", "Don't want to", "Would mind", "Wouldn't mind", "Want to", and "Want to very much". Since the CAS was still undergoing development at the time, eight items were used to obtain a gross, tentative index of relationships to the work community and the larger community (Libo, 1972).

Physical Health Status Questionnaire. The PHSQ was constructed for this study to obtain quantitative data on the number of physical illnesses experienced during the ten month period between Phases I and II. Frequency of illness information in self-report format accurately reflects health service contacts made by college students (Spilken & Jacobs, 1971). Documentation by numbers of days of sick leave and visits to physicians was rejected because actual illness episodes are not necessarily indicated by sick leave and visits to physicians are often reserved for incapacitating illness as well as for routine health maintenance. The PHSQ instructions were to consider an illness episode as a perceptible, noticeable change for the worse in usual health status. A check-list of 23 common illnesses was presented as an aid to recall. This list was adapted from two sources, a large

insurance company list of adult illnesses most frequently claimed for reimbursement, and from a list of most frequent primary adult diagnoses obtained from a university medical school. Space was provided for indicating any illnesses not included on the list and illness-free subjects were asked to so state in writing. More detailed information was requested for each illness episode on chronological occurrence, kind of illness, measures employed for recovery whether or not a physician was seen, and recovery time.

Statistical Treatment

A predictor variable for future health status, number of illness episodes, was analyzed using stepwise multiple regression equations, SPSS version 6.02 program. Criteria for ending computations were $F = .01$, tolerance level = $.01$. Significance level for Betas was set as $\alpha = .01$, $df = 1$, 316. Since this procedure requires complete sets of data for all cases, missing data and EPI Lie scores of seven or above left 318 cases. RLCQ health and total scores were omitted in order to avoid contamination of the criterion measure, PHSQ. Seven additional regression equations using Life Change Unit scores (a differential weighting indicative of amount of readjustment necessary), inclusion of the health subtest and total RLCQ score, and with demographic data omitted are not included here because the results were of methodological rather than substantive interest.

Results

Description of demographic variables as well as means and standard deviations of both predictor and criterion variables are available elsewhere (Orr, 1977). CAS work and larger community

questions were uncorrelated (Pearson $r = .02$), and hence were treated separately. Table 1 reports significant predictor variables, Betas, F ratios, cumulative R squares, and constants. Five variables were retained with significant Betas ($p = <.01$), including AIN, W, LOV, population of birthplace, sex and race. The obtained regression accounted for 14% of the variance. AIN accounted for 33% of the variance accounted for by the equation, or 5% of the variance of the criterion variable.

Table 1

Significant variables in Multiple Regression Equation
Beta, F Ratios, R^2 , R^2 Change, and Constant.

Variables	Beta	F Ratios	R^2	R^2 Change
AIN	0.20	13.92	.05	.05
W	0.17	9.31	.08	.03
LOV	-0.15	7.60	.10	.02
POP. BIRTHPLACE	0.12	5.39	.12	.02
SEX	0.12	5.53	.13	.01
ETHNIC GROUP	0.12	5.44	.14	.01

K: -2.35

Discussion

To understand the complex etiology of physical illness, one must recognize that the necessary agents (pathogens, genetic predispositions, etc.) are not sufficient to account for episodes of ill health. This study attempted to identify events, personality characteristics, interpersonal abilities, and community resources which contribute to illness. Three significant predictor variables - AIN, W, and LOV - constitute the major findings.

AIN measures the intensity of responses endorsed by an individual on both dimensions (affiliation-hostility, and domination-submission) of the ICL. Thus, a "mild" description of oneself might be "considerate", while an "extreme" answer would be "tries to comfort everyone." AIN indicates a tendency to overreact in inappropriate ways in interpersonal situations (Leary, 1957).

The second consistently significant variable was composed of the RLCQ work items which measured recent changes in the work environment. High scores accurately discriminated greater frequency of subsequent illness. For these persons, work change is a predictor of physical breakdown. Since work demand and related commitments occupy a major portion of time for persons regularly employed, the effect of rapid change is likely to be detrimental to the worker and the work environment through loss of productivity.

Since work items appear consistently as a predictor of future illness, it would be helpful to know which aspects of work change experiences were associated with increased illness. Within the RLCQ itself, participants indicated changes in the following categories: starting a new job, retiring, being fired or laid off, changes in work hours or conditions, changes in responsibilities, including promotion and demotion, troubles at work with

superiors, co-workers or others, efforts to improve work skills, and major readjustments in work. An informal review of agency critiques by former employees suggested concern with constantly shifting guidelines, requirements, and forms necessary to serve clients. The agency recognized these effects of increased work loads. Such changes may be related to the "staff burn-out syndrome" (Freudenberger, 1975), experiences as feelings of helplessness, hopelessness, and lowered self-concept brought on by the continued unsuccessful efforts of staff members to obtain lasting benefits for clients.

The third consistently significant variable was the LOV score of the ICL. LOV is the affiliation-hostility dimension on the scale. Illness was associated with the hostility extreme in interpersonal relationships. Such persons are characteristically unwilling to engage in close interpersonal relationships, somewhat suspicious with regard to the motives of others, and prefer to be vigilant and watchful rather than cooperative and helpful. Distance and isolation for others is associated with maladaptive psychological functioning and breakdown.

An important next step is to obtain information on the significance of the interactions among AIN, W, and LOV, using a prospective design in presently healthy populations. At risk and resistant profiles can be drawn for these groups and individuals. This information could then be used to plan training programs in interpersonal skills and/or environmental interventions to reduce the frequency of physical illness episodes.

Adequacy in interpersonal behavior suggests the concept of resistance resources (Antonovsky, 1979). This concept appears to be relevant at least for interpersonal abilities. In the interpersonal theory of personality, interpersonal behavior is seen as

inextricably linked to social roles and reactions necessary for survival. In this study, individuals who reported suspicion, distance, and inappropriateness in relationships with others experienced more illness. The implication is that interaction in more moderate appropriate ways, with greater trust, closeness, and caring would result in increased resistance to subsequent illness.

Although the individual may possess adequate interpersonal relationships and the ability to work successfully, the external environment may negatively influence efforts to use these abilities. Work stress for this population is associated with subsequent illness episodes. While this finding agrees with literature on life stress, it goes further since previous research has concentrated on the global concept of stress as being an accumulation of changes across many significant environments. Identification of specific stressful environments provides information leading to isolation of stressful events and the design of measures to reduce and/or prevent the stress and the resultant risk of physical disability.

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